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NTSB Order No. EA-4774

UNITED STATES OF AMERICA  
**NATIONAL TRANSPORTATION SAFETY BOARD**  
WASHINGTON, D.C.

Adopted by the NATIONAL TRANSPORTATION SAFETY BOARD  
at its office in Washington, D.C.  
on the 9th day of June, 1999

_____	)	
JANE F. GARVEY,	)	
Administrator,	)	
Federal Aviation Administration,	)	
	)	
Complainant,	)	
	)	
v.	)	Dockets SE-15291
	)	and SE-15292
	)	
JOHN JOSEPH RICHARD	)	
	)	
and	)	
	)	
CRAIG WILLIAM HILLMAN,	)	
	)	
Respondents.	)	
_____	)	

**OPINION AND ORDER**

The respondents have appealed the oral initial decision and order issued by Administrative Law Judge Patrick G. Geraghty on August 25, 1998, at the conclusion of an evidentiary hearing.<sup>1</sup> In that decision, the law judge affirmed the Administrator's

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<sup>1</sup>An excerpt of the hearing transcript containing the initial decision is attached.

orders of suspension with waiver of penalty,<sup>2</sup> on allegations of respondents' violations of Federal Aviation Regulations (FAR) section 121.315(c), because of their failure to adequately follow the "before starting engine" checklist prior to departure on Frontier Airlines Flight #43, on November 24, 1997. Respondent Richard served as pilot in command of the flight (captain), and respondent Hillman was second in command (first officer).

Respondents raise several issues on appeal. The Administrator has filed a brief in reply, urging the Board to affirm the law judge's initial decision. In the Board's view, none of the issues raised by respondents have merit, and their appeal is denied, as explained below.

The record establishes that shortly after departure of the subject flight, respondents were forced to return to their originating city because the aircraft would not pressurize. When Frontier maintenance personnel boarded the aircraft upon its return, it was discovered that all six circuit breakers on the pressurization (P-6) control panel were in the out, or "tripped" position, i.e., they had popped out and a white collar on each of the circuit breakers was visible.<sup>3</sup> Maintenance personnel simply reset the circuit breakers and ran the system in all three modes, automatic, standby, and manual, to insure that it worked. No

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<sup>2</sup>The Administrator waived the suspension of respondents' airline transport pilot certificates under the provisions of the Aviation Safety Reporting Program.

<sup>3</sup>The circuit breaker panel is located directly behind the first officer's seat and is visible to the captain if he were to look over his right shoulder.

maintenance discrepancies were logged, and the aircraft once again departed.

According to William Gregory, the line maintenance supervisor who discovered the circuit breakers in the out position, when he told respondents of his discovery, respondent Richard replied, "Oh, s--t." (TR-52). In all of his 38 years of experience working on the Boeing 737, Mr. Gregory, who also holds a commercial pilot certificate, has never seen or heard of all six circuit breakers being tripped at the same time. In his opinion, such an occurrence is highly unlikely because each of the six circuit breakers is tied to one of three independent systems. He also testified that this particular aircraft has had neither a prior or subsequent history of malfunction in the pressurization system.

Richard Morris is an aerospace engineer employed in the FAA's Aircraft Certification office in Seattle. His primary duties involve the certification of cabin pressure systems. Prior to joining the FAA in 1991, he worked as an Air Force engineer on-site with Boeing. Mr. Morris testified that he has never heard of all six circuit breakers popping at once. According to Mr. Morris, the six circuit breakers are tied to five different power sources, and the only way he could imagine all six popping at the same time would be if there was a power failure or electrical surge, but that, he noted, would affect other systems, which is not the case here. Mr. Morris also testified that he knows of no Airworthiness Directives relating

to problems with circuit breakers in the Boeing 737-200 aircraft.

Peter Lee is the FAA's Principal Operations Inspector for Frontier Airlines. He testified that Frontier Airlines' Flight Standards Manual, a portion of which was introduced into evidence as Administrator's Exhibit A-6, contains a "before starting engine" checklist. The checklist indicates that the crew ("CR") must insure that the circuit breakers are checked *and* that they are in the on position ("CKD/ON"). Some other items on this checklist call for the item to be checked only ("CKD") or on only ("ON"); some items are assigned to the captain only ("C") or the first officer only ("F"). Inspector Lee opined that the checklist assigns both the captain and the first officer the responsibility of checking the P-6 panel before engine start, and both must check the P-6 panel to insure that the circuit breakers are actually on. Inspector Lee concluded that the "before starting engine" checklist could not have been adequately followed by either respondent because, (1) there were no pressurization problems with the aircraft before or after this incident; (2) no maintenance was required on the aircraft after its return except for the resetting of the breakers; and (3) he has never heard of all six circuit breakers popping out at one time.

Respondent Richard testified that he *believes* that he glanced down at the circuit breakers when he entered the cockpit, but asserts in the alternative that he was, in any event, entitled to rely on respondent Hillman's response that the

circuit breakers had been checked. He argues that the "before starting engine" checklist requires only a crew response to ensure that the first officer had checked the circuit breakers during his preflight inspection.<sup>4</sup>

Respondent Hillman testified that he performed a normal preflight inspection, and that he looked at and checked all of the circuit breaker panels. In addition, he testified, when he entered the cockpit he discovered his oxygen mask was on the floor. As he bent down to retrieve it, he claims that he checked the circuit breakers again and saw that they were set. Respondent Hillman also testified that the "before starting engine" checklist is intended only to verify that the preflight inspection has been properly performed.

Jimmie Wyche is the executive vice president of operations for Frontier Airlines. He testified that the purpose of the "before starting engine" checklist is to confirm that critical items have been performed during the preflight inspection. It is not a "read and do" checklist, he explained. Mr. Wyche testified that, generally, the first officer performs the preflight inspection and then the captain will do a visual inspection, but that the captain is not required to recheck the first officer's work.

Brian Durbin, who is also a first officer for Frontier

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<sup>4</sup>Although this was their first flight together, respondent Richard testified that he was aware that respondent Hillman was a conscientious and qualified first officer and he assumed that he had properly performed his preflight inspection. (TR-85).

Airlines, testified that Page 15-20 of the Frontier Flight Standards Manual provides that either the captain or the first officer can perform the "Preliminary cockpit preparization" (sic), and that it is as of that time when the Manual specifically requires the P-6 panel to be checked. Another portion of the Frontier Standard Operating Procedures apparently states, "before starting the engine, the captain calls for the before start checklist. The first officer will read the before start checklist down to the line with responses as indicated. All items down to the line should have been completed with the panel scan flow." (TR-155).<sup>5</sup>

Edwin Stucka testified that he was the maintenance person who taxied the aircraft to the hangar prior to the subject flight. He checked the circuit breakers at the hangar before leaving, as required by the maintenance checklist. The circuit breakers were set in the "on" position when he deplaned.

At the close of the Administrator's case, respondents moved to dismiss the orders, arguing that their performance or nonperformance of the "before starting engine" checklist did not occur "[d]uring this flight," as alleged in the Administrator's orders. The law judge denied the motion, ruling that for purposes of the Administrator's orders, the flight began when respondents accepted the aircraft and encompassed their preflight

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<sup>5</sup>Neither portion of the Manual referred to by this witness was offered into evidence.

activities.<sup>6</sup>

The law judge found that the Administrator had produced sufficient circumstantial evidence to establish a *prima facie* case, and that the burden of going forward then shifted to respondents to establish that some other reasonable explanation existed to explain why all of the circuit breakers were found in the open position. The law judge further ruled that respondents had failed to meet that burden. He concluded that the checklist had not been adequately accomplished in accordance with the Flight Standards Manual. We agree.

Respondents' efforts to disparage the credibility of the Administrator's witnesses are unavailing. The Administrator's case was based on the requirements contained in the Flight Standards Manual. FAA Inspector Lee merely identified the possibility of a violation when he determined that an aircraft had been returned to the airport shortly after departure, but that no mechanical deficiency had ever been logged in the aircraft logbook to explain this unusual event. His estimation of the number of hours he has logged in a 737, whether 3,000 hours or 5,000, is simply irrelevant to this matter. He testified as the investigating officer, not as an expert witness, as respondents suggest. Respondents' attacks on the testimony of Mr. Morris are also unjustified. Mr. Morris' expertise is on

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<sup>6</sup>Respondents assert on appeal that this ruling was erroneous. We disagree. Paragraph 3 of the Administrator's order is in no way confusing. It states clearly that the allegations relate to a faulty preflight inspection that occurred just prior to their operation of N214AU on November 24, 1997.

cabin pressure issues, and it is based on his mechanical and aerospace engineering degrees as well as his employment history with the Air Force and Boeing prior to joining the FAA. He was never offered by the Administrator as an expert on electrical engineering issues, and respondents' counsel's efforts to cross-examine him on such issues do not make him so.<sup>7</sup>

In any event, to the extent that credibility of the witnesses was in issue, we concur with the law judge.<sup>8</sup> Respondent Hillman testified that he looked at the panel when he first performed his preflight inspection, and that he looked at it again when he bent down in the cockpit to retrieve his oxygen mask. He describes his performance of the "before starting engine" checklist generally, saying that he "did the normal below-the-line functions...." (TR-130). In response to the FAA's Letter of Investigation, respondent Richard claimed that both he and respondent Hillman checked their respective circuit breakers and responded with "checked," after Hillman called out "circuit/radio switches" (Administrator's Exhibit A-7), but he was much less certain at the hearing, where he stated that he *believes* he glanced down at the panel. Moreover, respondent

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(..continued)

Respondents had sufficient notice of the charges against them.

<sup>7</sup>The law judge properly ruled that respondents' counsel could not pose hypothetical questions that were not based on any facts or other evidence known by him to be true.

<sup>8</sup>The law judge notes in his decision (TR-198) that this case is both a circumstantial case and a credibility case, although he does not articulate specific credibility findings.



Richard's testimony that it did not matter anyway because he was entitled to rely on Hillman's response, likely affected the law judge's evaluation of his demeanor.<sup>9</sup> Thus, the law judge's conclusion that respondents had not adequately performed the checklist was in part supported by his credibility determination against respondents, based on the many inconsistencies in their various statements. We concur in the law judge's credibility findings.

Finally, respondents contend that the law judge's decision should be reversed because the Administrator failed to prove that all six circuit breakers were out at the time that the "before starting engine" checklist was read. Respondents' argument on the issue of burden of proof is misplaced. It was not necessary for the Administrator to prove why the circuit breakers were popped, nor was it the Administrator's burden to prove exactly when they popped. There is no dispute that the aircraft failed to pressurize immediately after takeoff because the circuit

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<sup>9</sup>Nor does respondent Richard ever address why, if he was so certain that the circuit breakers were on before takeoff, he responded with an expletive when he was told by the mechanic what had happened. In any event, we reject his reliance argument. Page 15-2 of the Flight Standards Manual provides in part that for ground operation, "flight crewmember duties have been organized in accordance with an area of responsibility concept. The panel scan diagram (page 15-3) describes the crewmember's area of responsibility and scan flow pattern for each panel." Page 15-3, which is also in evidence, shows that the AFT Electronic Panels must be scanned by both the captain and the first officer. The P-6 panel is an aft electronic panel. Administrator's Exhibit A-6. Thus, it was only after both respondents had scanned each panel of circuit breakers that they could, while going over the "before starting engine checklist," respond "checked" to each other, in response to the item, "CKD/ON."

breakers were off. The Administrator showed that no mechanical discrepancies were ever logged to explain this incident, and that the pressurization system of this aircraft had no history of mechanical problems. The Administrator also established that no repairs were required in order to return the aircraft to service. Finally, the Administrator produced convincing evidence that it was highly unlikely that all six circuit breakers could be tripped at once. Having produced sufficient circumstantial evidence from which the law judge could reasonably infer that respondents would have discovered that the circuit breakers were off had they adequately performed the checklist, it was then incumbent on respondents to offer some other reasonable explanation for this incident. Instead, respondents offered nothing. Respondents' counsel's questions on cross-examination concerning electrical systems, his definition, for the first time in his appeal brief, of the term "inductive kick," or, for that matter, his reliance on his own clients' unqualified opinions about the electrical workings of this aircraft, certainly cannot be given the same weight we would have accorded an expert in electrical engineering, had one been produced by respondents. It was, therefore, reasonable for the law judge to conclude that the Administrator had established, by a preponderance of the evidence, that respondents had violated FAR section 121.315(c).

**ACCORDINGLY, IT IS ORDERED THAT:**

1. Respondents' appeals are denied; and
2. The Administrator's orders and the initial decision affirming those orders are affirmed.

HALL, Chairman, FRANCIS, Vice Chairman, HAMMERSCHMIDT and BLACK, Members of the Board, concurred in the above opinion and order. GOGLIA, Member, did not participate.